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| 09/695,873 | 10/26/2000 | Lawrence E. Albertelli | FS-00496 | 2974 |

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| EXAMINER |
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NATNAEL, PAULO S M

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| ART UNIT | PAPER NUMBER |
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2614

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DATE MAILED: 02/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action

Application No.

09/695,873

Applicant(s)

ALBERTELLI, LAWRENCE E.

Examiner

Paulos M. Natnael

Art Unit

2614

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 26 January 2004 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

- a) ☐ The period for reply expires _____ months from the mailing date of the final rejection.
- b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on _____. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☐ The proposed amendment(s) will not be entered because:
- (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);
 - (b) ☐ they raise the issue of new matter (see Note below);
 - (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
 - (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____

3. ☐ Applicant's reply has overcome the following rejection(s): _____.
4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: see below.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☐ For purposes of Appeal, the proposed amendment(s) a) ☐ will not be entered or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: _____

Claim(s) objected to: _____

Claim(s) rejected: 1-12.

Claim(s) withdrawn from consideration: _____

8. ☐ The drawing correction filed on _____ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____
10. ☐ Other: _____


MICHAEL H. LEE
PRIMARY EXAMINER

First of all, the applicant mentions the Hibbs reference and a "Starikov" reference interchangeably. In the Hibbs et al., there is a Starikov reference U.S. Patent No. 5,276,337. However, this reference was not relied upon. The applied references are Hibbs et al., Sussmeier, and Harshbarger.

Secondly, The applicant's representative writes that "any evaluation or interpretation of the references which the Examiner may be making (and which is not at all clear from the statements of any of the various grounds of rejection) necessarily relies on inconsistency of the evaluation or interpretation made by the Examiner of the references applied. However, the Applicant's representative fails to point out the purported "inconsistency" and merely repeated the arguments from previous response.

Examiner's Response

Hibbs et al. discloses a method and apparatus for monitoring lithographic exposure. Hibbs et al clearly illustrates in fig. 1 varying feature size or line width and pitch. And, contrary to Applicant's assertion, column 3, line 59 does not disclose constant pitch, as Applicant asserts. Instead, the passage discloses that the center region has a width of .8 microns while the other regions have 0.4 microns. There is no constancy there.

Specifically, Hibbs discloses a mask structure (fig.1), having different feature or size (line-width) and pitch, not a single feature as Applicant alleges. Hibbs does not disclose these line are the same feature. In fact, it is clear from Fig.1 that the stripes have different features and different pitch to the right and left of the center field 16. Hibbs also discloses that the pitch is chosen in the monitor to be below the resolution of a lithographic exposure tool used therewith. (col. 3, line 66 thru col. 4, line 2) In other words, the resolution of the tool is directly linked to the result or the parameters of the target. Therefore, the argument is not persuasive, because the resolution of the camera or imaging system and the resolution of the target displayed cannot be separated, the latter depends on the performance of the former.

The applicant conveniently ignores the rejection as a whole and picks some words and terms in order to argue his point. The reference of Sussmeier teaches methods and apparatus for evaluating an imaging device. Sussmeier evaluates and calculates horizontal as well as vertical frequency of the row or column. (see fig.8, for example) Specifically, Sussmeier teaches "The number of relative minimums minus 1 divided by the number of physical pixels between the first and last relative minimums contained in a row is the number of black bars per pixel or horizontal frequency for the row. These values are averaged for all twenty rows to provide a single number for the horizontal frequency of each region. A typical value for horizontal frequency is 0.236 bars/pixel." (col. 10, 47-63) Thus, the argument that the Examiner is confusing contrast resolution with spatial resolution is unpersuasive, since it is clear from Sussmeier's teaching that the dynamic range, contrast resolution as well as spatial resolution or frequency content of the images are measured, evaluated and calculated. Furthermore, Sussmeier discloses a method and apparatus for evaluating an imaging device. Specifically, Sussmeier discloses that test target is used to determine the dynamic range of the imaging device. (see col. 5, lines 37-39, and col. 6, lines 26-34) Sussmeier teaches sub-fields as the gray and black areas of the target and measured. Furthermore, Sussmeier teaches that the mechanical drawing of Fig.2 is intended to indicate the relative size and position of the regions and zones, and does not accurately depict the appearance of the intermediate gray levels. Similarly, the array of regions that make up the test target may be regular or irregular in their arrangement. However, Sussmeier clearly discloses that the test targets in figures 3 and 4 are used to measure the contrast resolution and distortion of the imaging device under test. Therefore, the argument that the figures have neither subfields nor differing feature sizes or pitches much less encompassing the spatial resolution of the imaging, is unpersuasive.

In regards to claim 6, see rejection of Sussmeier. However, Neyman is utilized for its teaching of numerical labels or indicia. Neyman discloses a system for controlling the transfer of an image on a first medium to a second medium which uses a control chart as in Figs. 4-6 having fields labeled with luminance units 56a-56g corresponding to preferred range of luminance units. (see col. 10, lines 7-20) Therefore, it would have been obvious to those with ordinary skill in the art at the time the invention was made to modify the system of Sussmeier by adding numerical units or indicia within the target image to numerically indicate its resolution corresponding to preferred range of resolution values in order to make the inspection easier for an operator who would then quickly compare and determine the resolution of a given target image by inspecting the numerical values therein. Therefore, the argument that Neyman does not supplement Sussmeier or any other of the applied references in regard to the deficiencies thereof is not persuasive, as clearly shown above.

Harshbarger discloses an apparatus comprising a camera 26, monitor 22. The screen or monitor 22 is the target, where the test pattern are displayed. (see col. 8, lines 27-62) Fig.4H of Harshbarger shows a representation of sample test patterns which are subfield of the entire screen display, although Harshbarger doesn't use the term "subfield". Fig.4H shows a progression of size and pitch which in turn reflects the resolution of the imaging device (see claim 1 rejection above). Harshbarger, for example, discloses that "Step 64 is where the processing unit interprets the results by comparing the received results to known operating range parameters for the specific set up or display. Once the processing unit has determined the degradation state of the display under test, step 66 is the reporting of the results to the operator." (col.9, lines 54-62) Although, Harshbarger is testing the display, the target image is taken by the camera and displayed on the monitor. The resolution of the image reflects the performance of the imaging device, and the degradation of resolution results in loss of image clarity as Harshbarger teaches. Thus, the argument that Fig. 4H does not provide a target or technique by which a measurement of resolution can be performed by inspection, is unpersuasive.

If Applicant would like further reconsideration, since prosecution is closed, Applicant should do so in a continuation practice.